

## LaCrosse Encephalitis in North Carolina – Brian Byrd

- a) PLoS One 2009 – LaCrosse Incidence
  - 1) Many cases are asymptomatic or unrecognized
  - 2) Serologic evidence
- b) Life cycle
  - 1) Small mammals – amplifying host
  - 2) Transovarial transmission occurs
  - 3) Primary vector – *Aedes vexans*
  - 4) Secondary vectors
    - (i) *Aedes albopictus*
    - (ii) *Aedes japonicus*
- c) Trapping methods
  - 1) Types
    - (i) CDC light traps
    - (ii) BG Sentinel
    - (iii) Gravid traps
    - (iv) Nasci aspirator
  - 2) Many traps have a physiological bias
  - 3) None are good for control
- d) CDC Autocidal Gravid Ovitrap
  - 1) Passive trap
    - (i) Uses hay infusion as an attractant
    - (ii) Adult mosquitoes get trapped on a sticky card
  - 2) Questions
    - (i) Will trap collect LAC vectors?
    - (ii) Does infusion type matter?
  - 3) Study design
    - (i) Compared hay infusion to white oak leaf infusion
      - (a) Block design
      - (b) Collected and ID'ed mosquitoes
      - (c) Used PCR to check ID's
    - (d) Results
      - (i) 98% of species caught were LAC vectors
      - (ii) Most were gravid
        1. *Ae triseriatus* were more attracted to the hay infusion
        2. *Ae japonicus* didn't care
        3. Not enough *Ae albopictus* caught
    - (ii) Change in microbial communities in infusion
      - (a) Look at variability in time and space
      - (b) Does attraction change?
    - (iii) Is there an impact to mosquito populations?